

## IN THE SPECIFICATION

Rewrite the paragraph that begins at page 15, line 15 as follows:

FIG. 2 is a graph showing X - Y coordinates with X-axis representing R value (calculated down to the second decimal place) of ISO Color Contribution Index (ISO/CCI) specified in JIS7097 (expression of color contribution by ISO/CCI for taking a photograph) calculated on the basis of transmittance of a glass bulk within a range from 3250nm to 689nm specified in JOGISO2<sup>-1975</sup> and Y-axis representing refractive index (nd).

Rewrite the paragraph that begins at page 17, line 24 as follows:

For achieving particularly good G and R values of ISO/CCI, the ratio of  $(\text{BaO} + \text{Nb}_2\text{O}_5) / \{(\text{TiO}_2 + \text{WO}_3) \times 3 + \text{Bi}_2\text{O}_3 + \text{Nb}_2\text{O}_5\}$  calculated in mass % of BaO, Nb<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, WO<sub>3</sub> and Bi<sub>2</sub>O<sub>3</sub> should preferably be a greater value than 1.0.

1. (original) An optical glass comprising, in the mass percent:

$P_2O_5$	15 - 35%
$Nb_2O_5$	40 - 60%
$Na_2O$	0.5% to less than 15% and
$BaO$	3% to less than 25%;

having a ratio in mass % of  $(BaO + Nb_2O_5 / \{(TiO_2 + WO_3) \times 3 + Bi_2O_3 + Nb_2O_5\}) > 1.0$ ; being free of Pb and As; and having a refractive index (nd) within a range from 1.78 to 1.90 and an Abbe number (vd) within a range from 18 to 27.

2.(original) An optical glass as defined in claims 1 further comprising, in mass %

$Gd_2O_3$	0 – 5% and/or
$K_2O$	0 – 10% and/or
$Li_2O$	0 – 10% and/or
$Bi_2O_3$	0 – 5% and/or
$MgO$	0 – 10% and/or
$CaO$	0 – 10% and/or
$SrO$	0 – 10% and/or
$ZnO$	0 – 3% and/or
$SiO_2$	0 – 5% and/or
$B_2O_3$	0 – 5% and/or
$Al_2O_3$	0 – 4% and/or
$Ta_2O_5$	0 – 5% and/or
$ZrO_2$	0 – 3% and/or
$TiO_2$	0 – 5% and/or
$WO_3$	0 – 8% and/or
$Sb_2O_3$	0 – 0.02%.

3. (original) An optical glass as defined in claim 1 which, in X - Y rectangular co-ordinates with X-axis representing ISO Color Contribution Index G calculated by using spectral transmittance of a glass material measured by the Japan Optical Glass Industry Standard JOGISO2-<sup>1975</sup> (Measuring Method for Degree of Coloring of Optical Glass) and Y-axis

representing refractive index (nd), is within an area having a smaller value of ISO Color Contribution Index G and a higher refractive index (nd) than a straight line (SL3 – G) :  $Y = 0.0277X + 1.725$  and which, in X – Y rectangular co-ordinates with X-axis representing ISO Color Contribution Index R calculated by using spectral transmittance of a glass bulk material measured by the Japan Optical Glass Industry Standard JOGIS02-<sup>1975</sup> and Y-axis representing refractive index (nd), is within an area having a smaller value of ISO Color Contribution Index R and a higher refractive index (nd) than a straight line (SL3 – G) :  $Y = 0.0277X + 1.725$ .

4. (original) An optical glass as defined in claim 1 wherein the sum of sectional areas of bubbles contained in glass of 100ml shown in Table 1 of the Japan Optical Glass Industry Standard JOGIS02-<sup>1994</sup> (Measuring Method for Bubble in Optical Glass) is Class 1 – Class 4 and the sum of sectional areas of inclusion contained in glass of 100ml shown in Table 1 of the Japan Optical Glass Industry Standard JOGIS02-<sup>1994</sup> (Measuring Method for Inclusion in Optical Glass) is Class 1 – Class 4

5. (original) An optical glass as defined in claim 1 which, in X - Y rectangular co-ordinates with X-axis representing ISO Color Contribution Index G calculated by using spectral transmittance of a glass material measured by the Japan Optical Glass Industry Standard JOGIS02-<sup>1975</sup> (Measuring Method for Degree of Coloring of Optical Glass) and Y-axis representing refractive index (nd), is within an area having a smaller value of ISO Color Contribution Index G and a higher refractive index (nd) than a straight line (SL5 – G) :  $Y = 0.0329X + 1.7174$  and which, in X – Y rectangular co-ordinates with X-axis representing ISO Color Contribution Index R calculated by using spectral transmittance of a glass bulk measured by the Japan Optical Glass Industry Standard JOGIS02-<sup>1975</sup> and Y-axis representing refractive index (nd), is within an area having a smaller value of ISO Color Contribution Index R and a higher refractive index (nd) than a straight line (SL5 – R) :  $Y = 0.0288X + 1.713$ .

6. (original) An optical glass as defined in claim 1 comprising, in the mass percent:

P <sub>2</sub> O <sub>5</sub>	15 - 35%
Nb <sub>2</sub> O <sub>5</sub>	40 - 60%

Na <sub>2</sub> O	0.5% to less than 15% and
BaO	3% to less than 25;
and further comprising, in mass %:	
Gd <sub>2</sub> O <sub>3</sub>	0 – 4% and/or
K <sub>2</sub> O	0 – 6% and/or
Li <sub>2</sub> O	0% to less than 6% and/or
Bi <sub>2</sub> O <sub>3</sub>	0% to less than 5% and/or
MgO	0% to less than 10% and/or
CaO	0% to less than 10% and/or
SrO	0% to less than 10% and/or
ZnO	0 – 3% and/or
SiO <sub>2</sub>	0 – 5% and/or
B <sub>2</sub> O <sub>3</sub>	0 – 5% and/or
Al <sub>2</sub> O <sub>3</sub>	0 – 4% and/or
Ta <sub>2</sub> O <sub>5</sub>	0 – 5% and/or
ZrO <sub>2</sub>	0 – 3% and/or
Sb <sub>2</sub> O <sub>3</sub>	0 – 0.02% and/or
TiO <sub>2</sub>	0 – 5% and/or
WO <sub>3</sub>	0 – 8% and/or

a fluoride or fluorides of a metal element or elements contained in the above metal oxides, a total amount of F contained in the fluoride or fluorides 0 – 5%; and having a ratio in mass % of  $(\text{BaO} + \text{Nb}_2\text{O}_5) / \{(\text{TiO}_2 + \text{WO}_3) \times 3 + \text{Bi}_2\text{O}_3 + \text{Nb}_2\text{O}_5\} > 1.0$ .

7. (original) An optical glass as defined in claim 1 comprising, in the mass percent:

P <sub>2</sub> O <sub>5</sub>	15 - 35%
Nb <sub>2</sub> O <sub>5</sub>	40 - 60%
Na <sub>2</sub> O	0.5% to less than 15% and
BaO	3% to less than 25;
and further comprising, in mass %:	
Gd <sub>2</sub> O <sub>3</sub>	0.1 – 4% and/or
K <sub>2</sub> O	0 – 6% and/or

Li <sub>2</sub> O	0% to less than 6% and/or
Bi <sub>2</sub> O <sub>3</sub>	0% to less than 4.5% and/or
MgO	0% to less than 10% and/or
CaO	0% to less than 10% and/or
SrO	0% to less than 10% and/or
ZnO	0 – 3% and/or
SiO <sub>2</sub>	0% to less than 5% and/or
B <sub>2</sub> O <sub>3</sub>	0% to less than 5% and/or
Al <sub>2</sub> O <sub>3</sub>	0 – 4% and/or
Ta <sub>2</sub> O <sub>5</sub>	0 – 5% and/or
ZrO <sub>2</sub>	0 – 3% and/or
Sb <sub>2</sub> O <sub>3</sub>	0 – 0.01% and/or
TiO <sub>2</sub>	0 – 5% and/or
WO <sub>3</sub>	0 – 8% and/or

a fluoride or fluorides of a metal element or elements contained in the above metal oxides, a total amount of F contained in the fluoride or fluorides 0 – 5%; and having a ratio in mass % of  $(\text{BaO} + \text{Nb}_2\text{O}_5) / \{(\text{TiO}_2 + \text{WO}_3) \times 3 + \text{Bi}_2\text{O}_3 + \text{Nb}_2\text{O}_5\} > 1.0$ .

8. (original) An optical glass as defined in claim 1 which, in X - Y rectangular co-ordinates with X-axis representing ISO Color Contribution Index G calculated by using spectral transmittance of a glass material measured by the Japan Optical Glass Industry Standard JOGIS02-<sup>1975</sup> (Measuring Method for Degree of Coloring of Optical Glass) and Y-axis representing refractive index (nd), is within an area having a smaller value of ISO Color Contribution Index G and a higher refractive index (nd) than a straight line (SL8 - G) :  $Y = 0.0329X + 1.7245$  and which, in X - Y rectangular co-ordinates with X-axis representing ISO Color Contribution Index R calculated by using spectral transmittance of a glass bulk measured by the Japan Optical Glass Industry Standard JOGIS02-<sup>1975</sup> and Y-axis representing refractive index (nd), is within an area having a smaller value of ISO Color Contribution Index R and a higher refractive index (nd) than a straight line (SL8 - R) :  $Y = 0.0288X + 1.7208$ .

9. (original) An optical glass as defined in claim 1 comprising, in the mass percent:

P <sub>2</sub> O <sub>5</sub>	15 - 35%
Nb <sub>2</sub> O <sub>5</sub>	42 - 60%
Na <sub>2</sub> O	0.5% to less than 10% and
BaO	5% to less than 25;

and further comprising, in mass %:

Gd <sub>2</sub> O <sub>3</sub>	0.1 – 4% and/or
K <sub>2</sub> O	0 – 6% and/or
Li <sub>2</sub> O	0% - 2% and/or
Bi <sub>2</sub> O <sub>3</sub>	0% to less than 4.5% and/or
MgO	0% to less than 10% and/or
CaO	0% to less than 10% and/or
SrO	0% to less than 10% and/or
ZnO	0 – 3% and/or
SiO <sub>2</sub>	0.1% to less than 4% and/or
B <sub>2</sub> O <sub>3</sub>	0.2% to less than 5%and/or
Al <sub>2</sub> O <sub>3</sub>	0 – 4% and/or
Ta <sub>2</sub> O <sub>5</sub>	0 – 5% and/or
ZrO <sub>2</sub>	0 – 3% and/or
Sb <sub>2</sub> O <sub>3</sub>	0 – 0.01% and/or
TiO <sub>2</sub>	0 – 3% and/or
WO <sub>3</sub>	0 – 5% and/or

a fluoride or fluorides of a metal element or elements contained in the above metal oxides, a total amount of F contained in the fluoride or fluorides 0 – 5%; and having a ratio in mass % of  $(BaO + Nb_2O_5) / \{(TiO_2 + WO_3) \times 3 + Bi_2O_3 + Nb_2O_5\} > 1.1$ .

10. (original) An optical glass comprising, in the mass percent:

P <sub>2</sub> O <sub>5</sub>	15 - 35%
Nb <sub>2</sub> O <sub>5</sub>	40 - 60%
Gd <sub>2</sub> O <sub>3</sub>	0.1 – 4%
Na <sub>2</sub> O	0.5% to less than 10% and

K <sub>2</sub> O	0 - 6%
where the total amount of Na <sub>2</sub> O and K <sub>2</sub> O is 0.5% to less than 10%	
Bi <sub>2</sub> O <sub>3</sub>	0% to less than 5%
MgO	0% to less than 10%
CaO	0% to less than 10%
SrO	0 to less than 10%
BaO	0.5% to less than 25%
ZnO	0 – 3%
SiO <sub>2</sub>	0% to less than 5%
B <sub>2</sub> O <sub>3</sub>	0.2% to less than 5%
Al <sub>2</sub> O <sub>3</sub>	0 – 3%
Ta <sub>2</sub> O <sub>5</sub>	0 – 5%
ZrO <sub>2</sub>	0 – 3%
Sb <sub>2</sub> O <sub>3</sub>	0 – 0.03%

and a fluoride or fluorides of a metal element or elements contained in the above metal oxides, a total amount of F contained in the fluoride or fluorides 0 – 5%; being free of Pb, WO<sub>3</sub> and TiO<sub>2</sub> and having a refractive index (nd) within a range from 1.78 to 1.90 and an Abbe number (vd) within a range from 18 to 27.

11. (original) An optical glass comprising, in mass percent:

P <sub>2</sub> O <sub>5</sub>	15 - 30%
Nb <sub>2</sub> O <sub>5</sub>	42 – 60%
Gd <sub>2</sub> O <sub>3</sub>	0.1 – 4%
Na <sub>2</sub> O	0.5 – 9.6%
K <sub>2</sub> O	0 – 6%
where the total amount of Na <sub>2</sub> O and K <sub>2</sub> O is 0.5% to 9.6%	
Bi <sub>2</sub> O <sub>3</sub>	0 – 4.5%
MgO	0% to less than 10%
CaO	0% to less than 10%
SrO	0% to less than 10%
BaO	0.5% to less than 25%

ZnO	0 – 3%
SiO <sub>2</sub>	0.1% to less than 4%
B <sub>2</sub> O <sub>3</sub>	0.2% to less than 5%
Al <sub>2</sub> O <sub>3</sub>	0 – 3%
Ta <sub>2</sub> O <sub>5</sub>	0 – 5%
ZrO <sub>2</sub>	0 – 3%
Sb <sub>2</sub> O <sub>3</sub>	0 – 0.03%.

and a fluoride or fluorides of a metal element or elements contained in the above metal oxides, a total amount of F contained in the fluoride or fluorides 0 – 5%; being free of Pb, WO<sub>3</sub> and TiO<sub>2</sub> and having a refractive index (nd) within a range from 1.78 to 1.90 and an Abbe number (vd) within a range from 18 to 27.

12. (original) An optical glass as defined in claim 1 which, the sum of sectional areas of bubbles contained in glass of 100ml shown in Table 1 of the Japan Optical Glass Industry Standard JOGIS12-<sup>1994</sup> (Measuring Method for Bubbles in Optical Glass) is Class 1 – Class 3, the sum of sectional areas of inclusion contained in glass of 100ml shown in Table 1 of Japan Optical Glass Industry Standard JOGIS13-<sup>1994</sup> (Measuring Method for Inclusion in Optical Glass) is Class 1 – Class 3, and the degree of striae shown in Table 2 of the Japan Optical Glass Industry Standard JOGIS11-<sup>1975</sup> (Measuring Method for Striae in Optical Glass) is Class 1-Class 3.

13. (original) An optical glass as defined in claim 1 which, the degree of striae shown in Table 1 of the Japan Optical Glass Industry Standard JOGIS11-<sup>1975</sup> (Measuring Method for Striae in Optical Glass) is Class 1 or Class 2, the sum of sectional areas of bubbles contained in glass of 100ml shown in Table 1 of Japan Optical Glass Industry Standard JOGIS12-<sup>1994</sup> (Measuring Method for Bubble in Optical Glass) is Class 1 or Class 2, and the sum of sectional areas of inclusion contained in glass of 100ml shown in Table 1 of Japan Optical Glass Industry Standard JOGIS13-<sup>1994</sup> (Measuring Method for Inclusion in Optical Glass) is Class 1 or Class 2.

14. (original) An optical glass as defined in claim 1 having a refractive index (nd) within a



range from 1.80 to 1.85 and an Abbe number (vd) within a range from 23.8 to 25.7.